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## CHANGES IN AGRICULTURAL CONDITIONS SHOWN BY THE CENSUS OF 1910.\*

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I am under obligation to the preceding speakers for their comments on the changes in agriculture during the last decade as indicated by these summaries. Inasmuch as a copy of the summaries came into my hands only about twelve hours ago, I have been able to give comparatively brief attention to them.

I would say in regard to the summaries that the information given is scarcely detailed enough to make possible its proper interpretation. The farms are not distributed according to the chief source of income, either in general or according to size groups. Further, we cannot discriminate between the different parts of a state, which may be given up to different kinds of farming, since our data are simply for the state as a whole. To illustrate, in Illinois we have the northern or dairy section, the central or corn belt, and the southern or wheat belt. Now we cannot tell in what proportion such changes as have occurred in Illinois relate to one or another or to all three of these sections. Again, in dealing with the values indicated in these summaries we should remember that these values have not been corrected to correspond with any change in the value of money that may have occurred within the decade.

Dr. Coulter has already brought out the significance of many of the changes of a general character so that it is unnecessary to dwell upon these points at length. Some of the more striking of these I shall refer to, with particular reference to the state of Illinois.

1. In regard to the changes in the distribution of farms according to size groups, there has been a general increase in the number of farms of 19 acres and under (except in Illinois, where a slight decline is shown) and almost as general a de-

\*Discussion at special session on Agricultural Statistics, annual meeting of the American Statistical Association, St. Louis, Mo., December 29, 1910.

crease in the number of farms in the size groups 20–49 acres, and 50–99 acres. There has been a similar decrease in the number of farms in the size groups 500–999 acres, and 1,000 acres and over, in the North Central states, for which we have data—except in the case of Michigan and also in the case of Missouri and Minnesota for the former group. In general, the opposite conditions prevail in regard to the latter two size groups in the Eastern States for which we have data. All of the North Central States show an increase in the number of farms, in the two size groups 100–174 acres and 175–499 acres, especially the latter, except Illinois and Minnesota which show small decreases in the former (in Iowa the increase in size group 100–174 acres is negligible). Almost without exception the Eastern States show a decrease in the number of farms in these two size groups.

The changes, then, in the western section of states seem to be, in the main, in the direction of the breaking up of the largest sized farms and of the disappearance of the moderately small farms, and the redistribution of the same into the smallest sized farms and into the size groups 100–174 acres and 175–499 acres.

We cannot tell whether this decrease in the number of farms in certain size groups means a change in the size of farms for particular purposes, or a decrease in the number of farms devoted to those particular purposes, or both. In Illinois the indications are for both, with a greater preponderance of grain farms and of live stock farms in group 175–499 acres as compared with group 100–174 acres, than existed in 1900. The concentration in the former of these two groups in Illinois probably connotes the relative increase in grain farming in that state during the last decade, since grain farms were generally larger in size, in Illinois, in 1900, than live-stock farms—except in the case of very large farms,—and the decline in the number of these latter, of course, serves to strengthen the supposition of the substitution of grain farming for livestock farming in Illinois.

This general concentration in the size groups 100–174 acres, and 175–499 acres, in the grain growing section, probably represents the adjustment of the size of the farm to the

most economical use of machinery, inasmuch as farm implements and machinery for this purpose are increasing both in size and in variety.

It may be that Dr. Coulter's suggestion that the increase in the number of farms of 19 acres and under means, in general, an increase in vegetable farming; but it is to be noted that in 1900, in Illinois, there were more vegetable farms in the size group 20-49 acres than in any other single size group.

2. The moderate but general increase in the "average acres per farm" in the North Central group, and the quite as general, and in some cases striking, decrease in the same in New England and Middle Atlantic States attract our attention. In the grain section the tendency of the farm to adapt itself to the size most economical for the use of machinery is, as remarked above, apparent. Any tendency in this direction, however, would naturally be slow, since there are so many retarding factors in regard to change in the size of farms. In Illinois, although the average farm is now larger than at any previous time since 1860, it is still no larger than it would have been in 1900 had not that state proved an exception to the general tendency in the North Central section, during the decade 1890-1900, toward a larger acreage for the average farm.

3. A general decrease in the number of owners, coupled with (a) a general and surprisingly moderate increase in tenancy in the North Central States (a marked increase—22 per cent.—in Minnesota, and a considerable loss—5 per cent.—in Missouri), and a quite as general, and in some cases decidedly marked, decrease in tenancy in the Eastern States; and (b) a marked increase, in nearly all sections for which we have data, in the number of farms operated by hired managers, is shown.

Illinois is a striking illustration of this movement. During the last decade the actual number of farm tenants in the whole state of Illinois increased to the extent of only 301, or a proportional increase of three tenths of one per cent.; while farms operated by hired managers in Illinois number 440 more in 1910 than in 1900—a proportional increase of 22.6 per cent. To be sure, the proportion of tenants to "all

farms by tenure" has increased, in Illinois, within the last decade from 39.3 per cent. to 41.4 per cent.; but even this very moderate increase is due rather to the decline in the total number of "all farms by tenure" than to any real increase in the number of tenants.

This greatly increased tendency towards the operation of farms by hired managers indicates the comparative failure of our tenancy system. It indicates a growth of capitalism in agriculture—a movement away from the coöperation implied in tenancy—but a capitalism that, on account of the small increase in the average size of farms, is not at all alarming, and that is more apt to be beneficial than otherwise.

Without knowing whether such is actually the case, I suggest that this general and striking increase in the number of farms operated by hired managers may be due to the fact that our agricultural colleges have been turning out, in recent years, increasing numbers of young men trained in scientific agriculture. Perhaps these young men are being more and more utilized as hired managers and are, to a less extent than previously, taking up farms as tenants.

I should like to call attention to the fact that the movement in regard to tenancy in Illinois during the last decade presents an exception to a principle heretofore generally recognized, and just now referred to by Professor Hibbard respecting tenancy in Iowa—namely that tenancy seems to be most prevalent in the most fertile sections and seems to be coincident with high values for land. Now Illinois is undoubtedly one of the most fertile states—if not the most fertile state—in the United States, and land values have increased over 100 per cent. in that state within the past ten years, while tenancy has been practically at a standstill in the state during the same period.

4. The increase in the value of land seems to be most emphasized in those states where we have reason to believe there is a tendency toward grain raising, while the increase in the value of farm buildings has apparently been largest in those states where we have reason to believe that grain farming has been on the decline. This is as might have been expected.

The caution given above, that values may need to be corrected on account of possible changes in the value of money, should be kept in mind at this point.

5. These summaries show a surprisingly moderate increase in the value of farm implements and machinery in the grain-growing states during the past decade as compared with the amount of money expended for farm labor. This is the more surprising when taken in connection with the supposedly increasing size and variety of farm implements and machines required on the most successful grain farms, and the increasing extent to which such farm machinery is supposed to be replacing farm labor. If it means that farm machinery has increased in price in the last decade less rapidly than prices for other articles or commodities, it may be taken as indicating that the monopolization of the farm machinery industry in the past few years has not resulted in higher prices for this class of products to the extent anticipated.

The relatively larger increase in the amount of money expended for farm labor may mean higher wages, or more farm laborers, or both.

6. In the face of an apparent increase in grain farming in Illinois and in the face of the asserted deterioration in soil fertility in that state, I have been at a loss to explain the considerable decline in the amount of money expended for fertilizer in the state during the past decade. Perhaps Dr. Coulter's explanation that farmers are, as a result of the agitation by farm journals, by the state agricultural colleges, and by the United States Department of Agriculture against the indiscriminate purchase of fertilizer, really buying with more discrimination, may be correct. It is quite possible, of course, that the expenditure for this purpose in Illinois may have been exceptionally small during the Census year.